Met Office confirms wettest June in over a century

Description

Provisional Met Office figures for June show double the average amount of rain has fallen, making it the wettest June since records began in 1910.

This is the second record breaking month of rainfall this year, with April also topping the rankings. The period from April to June is also the wettest recorded for the UK.

It is also the second dullest June on record with just 119.2 hours of sunshine, narrowly missing out on the record of 115.4 hours set in 1987. To complete the disappointing picture, it has also been the coolest June since 1991 with a mean temperature of 12.3 deg C.

Unsettled weather has never been from the UK during the past three months, with only the latter half of May seeing a spell of prolonged fine weather.

Movements in the track of the jet stream, a narrow band of fast flowing westerly winds high in the atmosphere, have contributed to the weather we have seen.

This June has seen periods of heavy and prolonged rain, as well as short but exceptionally heavy showers.

The total UK rainfall was 145.3mm – exactly twice as much as you would normally expect compared to the 1971-2000 average. This beats the previous record of 136.2 mm set in 2007.

Looking at individual countries, it has been the wettest June on record for Wales and Northern Ireland, the second wettest in England, and the eighth wettest in Scotland.

Many areas have seen extremely high rainfall – with 83 (out of 237) observation sites marking their wettest June on record. Some of these aren't significant as they have very short recording histories, just a year in some cases, but others have been operating much longer – Otterbourne in Hampshire been operating for 119 years.

One of the key features of the month has been that the far north west of the UK, traditionally the wettest part of the country, has been remarkably dry.

Up until quite late in the month, a few stations in this area were below their record lowest rainfall amounts – but they just missed the record books with rain falling in the last few days of the month.

Met Office provisional June figures

	mean temperature		sunshine duration		rainfall	
	Actual	Difference from 1971-2000 average	Actual	% of 1971-2000 average	Actual	% of 1971-2000 average
	degC	degC	hours	%	mm	%

UK	12.3	-0.3	119.2	70	145.3	200
England	13.4	-0.2	121	67	142.6	227
Wales	12.7	0	120.6	71	205	238
Scotland	10.4	-0.6	119.4	77	129.4	152
N Ireland	12	-0.4	97.4	64	169.2	235
England & Wales	13.3	-0.2	121	68	151.2	229
England N	12.5	-0.3	105.9	63	162.5	234
England S	13.9	-0.2	129	69	132.1	222

Current or previous wettest years on record are:

· UK: (Previous) 136.2 mm in 2007

· England: 146.0 mm in 2007

· Wales: (Previous) 183.1mm in 1998

· Scotland: 155.0 mm in 1938

· Northern Ireland: (Previous) 152.6 mm in 1912.

Average UK conditions (1971-2000):

· Mean temperature: 12.6 deg C

· Rainfall: 72.6mm

· Sunshine: 169.4 hours

Related articles

- Wettest June sees double rainfall (itv.com)
- June seeps into record books as wettest month (guardian.co.uk)
- UK News: Record rainfall makes June the wettest since 1910 (walesonline.co.uk)

Date Created
July 2012

July follows where June left off with more wet weather to come

Description

The theme of wet weather is set to continue this week – with particularly persistent and heavy rain affecting parts of the UK over the next few days.

Our forecasters have issued Severe Weather Warnings for this period, and the public are advised to keep up to date with online and broadcast forecasts during this unsettled spell.

A low pressure system which has moved in from the west is set to be positioned over or close to the UK until early next week, bringing in a series of rain-bearing weather fronts and generating thundery showers at times.

Martin Young, Chief Forecaster at the Met Office, said: “We are expecting outbreaks of heavy rain across a wide area of the UK, with worst affected spots likely to be in central and northern parts of the country.

“Rainfall totals could be 40-60mm widely across warning areas, but some places could see up to 100mm of rain through Friday and into Saturday. Given the saturated ground from the record rainfall in June, this could cause disruption – including difficult driving conditions and flooding in some areas.”

The Met Office will be working with partners and emergency responders throughout this period to keep everyone up to date with the latest developments.

An Environment Agency spokesman said: “Heavy rain on Friday and Saturday may lead to significant flooding of properties across parts of northern England. We urge people to remain vigilant and prepared for flooding by checking the Environment Agency website and signing up for localised river flood warnings. The Environment Agency has mobilised teams across the country to check flood defences, clear any river blockages and closely monitor river levels to help reduce the risk flooding.”

You can access the latest weather forecast on the Met Office website or via iPhone and Android Apps as well as on your mobile phone so you are never far from the latest weather forecast. You can also find out more about what to do when heavy rain is forecast.

Related articles

- Weather alert as deluge expected (belfasttelegraph.co.uk)
- More heavy rain prompts warning of further floods (itv.com)

Date Created
July 2012

Latest weather satellite goes into orbit

Description

The latest weather satellite in Europe's highly successful Meteosat second-generation series has just gone into orbit after lifting off on an Ariane space rocket yesterday evening.

It is now being moved into its precise position before it can provide continuous observations of the weather from space to Meteorological agencies across Europe and beyond.

MSG-3, or Meteosat-10 as it will be called once it starts sending images back to Earth, will be stationed at 0° longitude, over the Gulf of Guinea on the Equator, in geostationary orbit, where its speed precisely matches the Earth's rotation, keeping a constant eye on developing weather.

ESA's Director General, Jean-paul Jacques Dordain said: "This launch allows EUMETSAT and ESA to continue providing Europeans with high quality observations of weather from space, with MSG-3 being especially valuable in rapid detection and warning of extreme weather situations."

"These programmes have ensured high-quality weather forecasts, the successive generations have improved these forecasts and they have brought tangible economic benefits for and improving the daily life of every European."

The primary instrument on Meteosat-10 is the Spinning Enhanced Visible and Infrared Imager, or Seviri, which monitors of developing meteorological systems by spinning the earth, line by line, to build a picture that can then be used by weather forecasters. It collects information in 12 different wavelengths, tracing information such as cloud development, temperature and movement as well as measures of humidity and temperature through the atmosphere.

Dr John Eyre, head of satellite applications at the Met Office, who contribute to the funding of the Meteosat programme, said: "Meteosat gives you a very good view of the weather happening right now. It gives you movie loops of images showing you the clouds as they develop. It's for what we call ' nowcasting', and we can use that information to extrapolate forwards for the next few hour."

The two currently operational MSGs are used in distinct ways. Meteosat-9 builds images of the entire field of view – a full Earth disc – in 15 minutes, while Meteosat-8 rapidly scans a smaller area covering Europe, to provide imagery in just five minutes.

This allows the weather agencies to better follow the development of powerful and potentially dangerous thunderstorms in Eumetsat member states.

About Meteosat Second Generation

MSG is a joint programme undertaken by ESA and EUMETSAT. ESA is responsible for the development of satellites as defined by EUMETSAT. ESA also performs the Launch and Early Orbit Phase operations required to place the spacecraft in geostationary orbit, before handing it over to EUMETSAT for exploitation.

EUMETSAT develops all ground systems required to deliver products and services to users and to respond to their evolving needs, procures launch services and operates the full system for the benefit of users.

In addition to its weather-watching mission and collection of climate records, MSG-3 has two secondary payloads.

The Global Earth Radiation Budget sensor will measure the amount of solar energy that is radiated back into space to determine how much energy is introduced into the climate system and to provide insights into the atmospheric circulation between the day and night sides. A Search & Rescue transponder will turn the satellite into a relay for distress signals from emergency beacons.

The last of the series, MSG-4, is planned for launch in 2015.

Date Created
July 2012

Heavy rainfall across the UK

Description

As forecast heavy rain has fallen across large parts of the UK causing flooding and disruption to travel and outdoor events.

Here is a selection of rainfall totals recorded at Met Office observation sites on Friday 6 July 2012:

UK RAINFALL 6 JULY 2012 1am – 7 JULY 1am		
Location	**Area**	**Rainfall (mm)**
EMLEY MOOR	WEST YORKSHIRE	56.6
RYHILL	WEST YORKSHIRE	52.6
HOLBEACH	LINCOLNSHIRE	44.8
NORMANBY HALL	HUMBERSIDE	43.6
MARKET BOSWORTH, BOSWORTHPARK	LEICESTERSHIRE	41.6
BINGLEY	WEST YORKSHIRE	40.2
LOFTUS	CLEVELAND	39.4
BOSCOMBE DOWN	WILTSHIRE	38.6
SHAWBURY	SHROPSHIRE	36.6
SHEFFIELD	SOUTH YORKSHIRE	36.2

COTON-IN-THE-ELMS	DERBYSHIRE	36
NEWPORT(SALOP)	SHROPSHIRE	36
BRADFORD	WEST YORKSHIRE	36
PORTHMADOG	GWYNEDD	35.2
SCARBOROUGH	NORTH YORKSHIRE	34.6
ABERDARON	GWYNEDD	33.6
NANTWICH, REASEHEATH HALL	CHESHIRE	32.6
NOTTINGHAM, WATNALL	NOTTINGHAMSHIRE	32.4
KEELE	STAFFORDSHIRE	32
FYLINGDALES	NORTH YORKSHIRE	31.8
LLYSDINAM	POWYS	31.2
ISLE OF PORTLAND	DORSET	30.4
SHOBDON AIRFIELD	HEREFORD&WORCESTER	30.2

Overnight into Saturday the heaviest rain fell across the southwest of England and parts of southern Scotland:

UK RAINFALL 6 July 7pm – 7 July 10am

Location	Area	Rainfall (mm)

DUNKESWELL AERODROME	DEVON	45
ISLE OF PORTLAND	DORSET	42.4
EXETER AIRPORT	DEVON	41.8
NETTLECOMBE, BIRDS HILL	SOMERSET	38
CAMBORNE	CORNWALL	37.8
CHARTERHALL	BERWICKSHIRE	37.6
PLYMOUTH, MOUNTBATTEN	DEVON	35.2
LISCOMBE	SOMERSET	34.6
EDINBURGH,ROYAL BOTANIC GARDEN	MIDLOTHIAN	33.4
CULDROSE	CORNWALL	31.8
CARDINHAM, BODMIN	CORNWALL	28.6
ST ATHAN	SOUTH GLAMORGAN	26
STORMONT CASTLE	DOWN	25.4

Date Created
July 2012

Heaviest rain moves away after wet day in South West

Description

It has been another very wet day across parts of the UK, resulting in widespread flooding across parts of the south west of England. Severe Flood Warnings were issued by the Environment Agency for several rivers through the day. This followed the Met Office issuing a Red Severe Weather Warning on Friday evening for heavy rain in parts of south west England.

The heavy rain that had affected parts of the north Midland and northern England on Friday pushed further north bringing heavy rain to parts of the far north of England and southern and central Scotland.

The table below shows the amount of rain that fell between 7.00 pm on Friday and 4.00 pm on Saturday.

UK RAINFALL 06 July 7.00 pm – 07 July 4.00 pm

SITE NAME	AREA	RAINFALL AMOUNT (MM)
DUNKESWELL AERODROME	DEVON	56.2
ISLE OF PORTLAND	DORSET	52.6
NETTLECOMBE, BIRDS HILL	SOMERSET	46.8
EXETER AIRPORT	DEVON	44.8
EDINBURGH, ROYAL BOTANIC GARDEN	MIDLOTHIAN	42.8
LISCOMBE	SOMERSET	40
CHARTERHALL	BERWICKSHIRE	38.8
CAMBORNE	CORNWALL	37.8

PLYMOUTH, MOUNTBATTEN	DEVON	36.6
HURN	DORSET	35.6
WIGHT: ST CATHERINES POINT	ISLE OF WIGHT	34.4
ST ATHAN	S. GLAMORGAN	33.8
CULDROSE	CORNWALL	31.8
SWANAGE	DORSET	30
CARDINHAM, BODMIN	CORNWALL	29.6
YEOVILTON	SOMERSET	28.4
STORMONT CASTLE	DOWN	26
NORTH WYKE	DEVON	24.6
SAUGHALL	AYRSHIRE	23.8
HELENS BAY	DOWN	23.8

The forecast for the rest of tonight is for outbreaks of rain to continue in both far northern and southeastern parts of the UK. Showers in many other areas should die away, with western parts in particular becoming largely dry. Some eastern and central parts may continue to see isolated heavy showers. The forecast for the rest of tonight is for outbreaks of rain to continue in both far northern and southeastern parts of the UK. Showers in many other areas should die away, with western parts in particular becoming largely dry. Some eastern and central parts may continue to see isolated heavy showers.

Date Created
July 2012

Some areas already received over 250% of average July rainfall

Description

Even though we are not even half way through the month of July, due to the persistent heavy rainfall, some areas have already seen more than 250% of their average July rainfall. The Isle of Portland, in Dorset, has seen the most rainfall, with 97 mm so far, way above its usual July average of 34.2 mm.

Station Name	Area	July 2012 monthly t
Isle Of Portland	Dorset	97
Hurn	Dorset	93.8
Bingley, No 2	West Yorkshire	88.6
Edinburgh, Royal Botanic Garden	Midlothian	88
Camborne	Cornwall	83.2
Charterhall	Berwickshire	83.2
Dunkeswell Aerodrome	Devon	82.4
Pateley Bridge, Ravens Nest	North Yorkshire	82.2
Ryhill	West Yorkshire	77.8
Salsburgh	Lanarkshire	77

The heavy rain is set to continue, with severe weather warnings in place for some areas. Keep up to date with your local forecast.

Date Created
July 2012

The UK’s wet summer, the jet stream and climate change*

Description

There’s no disputing it has been a very disappointing summer so far in 2012 – with the wettest June for over a century followed up by a very wet start to July.

In fact, barring a warm and dry spell towards the end of May, the weather has been persistently dull and wet since April – which was also the wettest in records dating back to 1910.

Our weather here in the UK is complex and determined by many different factors, including the position of the jet stream.

This is the narrow band of fast moving winds which runs from west to east across the Atlantic high up in the atmosphere.

How does the jet stream affect UK weather?

Weather (or low pressure) systems bearing rain and unsettled conditions move across the Atlantic on a regular basis. The jet stream guides these systems, so its position is important for UK weather.

In summer, we would expect the jet stream to be north of the UK – dragging those weather systems away from our shores to give us relatively settled weather.

So far this year it has been to the south of the UK, guiding those systems straight to us. This is the position we’d normally expect the jet stream to be in during winter, when we are more accustomed to these wet conditions.

So why is the jet stream stuck so far south?

The jet stream, like our weather, is subject to natural variability – that is the random nature of our weather which means it is different from week, month or year to the next.

We expect it to move around and it has moved to the south of the UK in summertime many times before in the past. It has, however, been particularly persistent in holding that position this year – hence the prolonged unsettled weather.

This could be due to natural variability – a bad run of coincidence, if you will – but climate scientists are conducting ongoing research to see if there are other factors at play.

Changes in sea surface temperatures due to natural cycles may be playing a part, but there is more research to be done before anyone can establish how big a role they play.

Research has also suggested that reducing amounts of Arctic sea-ice could be affecting weather patterns, but more research needs to be done to confirm this link. Currently Arctic sea-ice is at a record low for this time of year.

Is climate change playing a role?

In the long term, most climate models project drier UK summers – but it is possible there could be other influences of a changing climate which could override that signal on shorter timescales.

If low levels of Arctic sea ice were found to be affecting the track of the jet stream, for example, this could be seen as linked to the warming of our climate – but this is currently an unknown.

The Met Office Hadley Centre, working with climate research centres around the world, is making strides in determining how the odds of extreme weather happening have been influenced by climate change.

However, it is very difficult to do this type of analysis with such highly variable rainfall events, so it may take many years before we could confirm how the odds of this summer's wet weather happening have been altered by greenhouse gases.

We do know that the warmer air is, the more moisture it can hold. We have seen a global temperature increase of more than 0.7 deg C (since pre-industrial times) and this has led to an increase of about 4-5% in atmospheric moisture.

This means that when we do get unusual weather patterns such as we're seeing now, it's likely there will be more rainfall than the same patterns might have produced in the past. In short, it seems when it does rain, it is heavier.

Taking into account this effect, perhaps it's not surprising new records like those for this April and June are being set. In fact, the wettest July and November in the records dating back to 1910 happened in 2009, making a total of four record wettest months in the past four years. If wet months occurred randomly, we would expect only one record to have been broken since 2006.

For temperature, April (2011), May (2008), July (2006), September (2006) are all recent warmest records. Again, this is much more frequent than would be expected if temperatures were not rising.

What about elsewhere in the world?

Looking at the bigger picture, the jet stream may be having an impact elsewhere in the northern hemisphere.

It is stuck in a persistent pattern of waves, with one of these 'waves' taking it to the south of the UK.

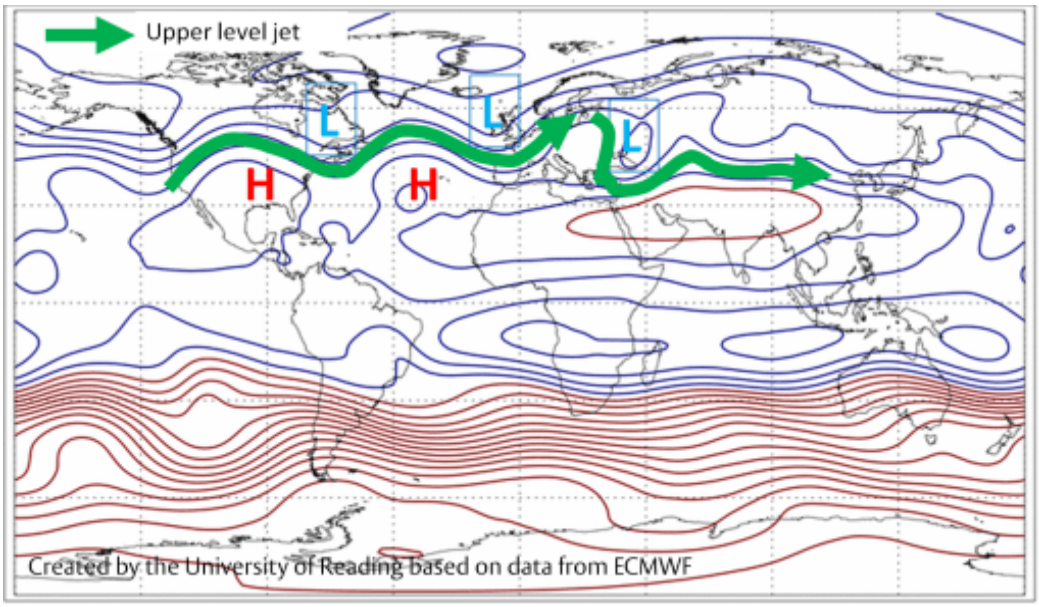


Figure shows upper level wind patterns in early July 2012, with the northern hemisphere jet stream marked with arrows.

The figure gives a picture of the upper level winds for the first week in July, but the wavy nature of the jet stream has been persistent throughout June.

Meanders of the jet north and south can be seen across the US, the Atlantic and into Europe.

While the wet weather in the UK has been under a southward meander of the jet stream, the recent Russian floods near the Black Sea appear to have been beneath the next trough to the east.

The US heat wave is also beneath a northward meander and a ridge of high pressure.

* This article has been written in collaboration with the Walker Institute for Climate System Research, University of Reading.

Date Created
July 2012

Does the jet stream affect hurricanes?

Description

Many news and weather articles, including our own blog, have reported recently that the UK's wet summer is caused by the jet stream being situated further south than usual for this time of year.

However, some have questioned whether there is a link between this and the hurricane activity seen so far in the Atlantic.

So how is the Atlantic hurricane season shaping up and has it been influenced by the weather at higher latitudes?

Atlantic hurricane season so far

The Atlantic hurricane season officially started on 1 June, but in 2012 it began early with two tropical storms, Alberto and Beryl, forming in May.

After a break of almost three weeks there were two more storms, Chris and Debby, in the latter part of June, with Chris becoming the first hurricane of the season.

Since then there has been another lull of almost three weeks in Atlantic tropical storm activity.

Has the Atlantic hurricane season been unusual?

In mid-July it is far too soon to make judgements about how unusual a hurricane season is likely to be based on activity so far. However, it was certainly unusual to see four tropical storms before the end of June as this has never been observed before in over 150 years of records.

The recent quiet spell in Atlantic hurricane activity is by no means unusual. Atlantic hurricane seasons are often characterised by bursts of activity followed by quiet spells.

The peak of activity usually runs from the second half of August through to October. Even in some years which turned out to be very active, early season activity was low.

For example, by this time in 2010 and 2011 there had been just one tropical storm. Each of these seasons ended up yielding a total of 19 storms.

Is the jet stream involved?

The jet stream which affects UK weather is much further north than where the majority of tropical storms develop and hence has no direct impact on their formation.

However, once a tropical storm develops and starts to move to higher latitudes the jet stream can influence where it ends up. For example, in September 2011 as Hurricane Katia moved northwards in the Atlantic it met a powerful part of the jet stream and was swept eastwards as a strong 'post-tropical'

storm which brought stormy conditions to the northern UK.

Will it be an active hurricane season?

The Met Office seasonal forecast for Atlantic tropical storm activity issued in May predicted a near-average season with the most likely number of storms in the June to November period being 10. Since June two tropical storms have occurred so far (the two May storms fall outside of this prediction period).

One of the major influences on the season's activity includes the existence of La Niña or El Niño conditions (natural cycles which affect sea temperatures in the equatorial east Pacific).

Having just come out of an extended period of La Niña conditions, forecasts suggests an El Niño could develop before the end of the current hurricane season.

This would suppress hurricane activity in the Atlantic by disrupting the airflow over the regions where they usually develop.

However, it is worth remembering that it is 20 years since the quiet El Niño influenced Atlantic hurricane season of 1992. Despite being a quiet season overall, it still managed to spawn the deadly and powerful Hurricane Andrew which brought devastation to parts of Miami in Florida.

For more information on tropical cyclones worldwide visit our web pages or follow @metofficestorms on Twitter.

Date Created
July 2012

First half of July continues wet and gloomy theme

Description

Provisional mid-month statistics from the Met Office show that, after an exceptionally wet and gloomy June, the first half of July has continued the disappointing theme.

Normally at the halfway stage of a month we'd expect sunshine and rainfall to be somewhere around 50% of the average for the whole month, but the figures show a very different story.

Looking at the UK, we've already had more than the average rainfall we'd expect for the entire month – with 71.8mm (103% of the 1971-2000 average) falling up to the 15th of the month.

Within that there are some big variations, however. Northern Ireland and Scotland have seen close to normal levels of rain, with 35.9mm (49%) and 56.4mm (61%) respectively. England and Wales have seen much more relative to their monthly averages, with 81.2mm (150%) and 95.8mm (122%) respectively.

Looking in even more detail at Scotland, however, you can see bigger variations in rainfall patterns: Mid Lothianshire in south east Scotland has seen 105.8mm (167%) of rain, while the Western Isles in the far north west of Scotland have seen just 10mm (10%).

This illustrates how rainfall patterns have really bucked their usual trend, with the far north west – which is usually one of the wettest places in the UK – continuing to be one of the driest areas. This is partly due to the position of the jet stream, as discussed in previous articles.

Looking at sunshine, there is a more consistent pattern across the regions. The UK has seen 45.5 hours of sunshine, just 26% of the average for the whole month, so around half what we would normally expect to see by this time. So far, England, Wales, Scotland and Northern Ireland have all seen about a quarter to a third of their monthly quota – making for a very dull month thus far.

Temperatures have also been on the disappointing side – with the UK seeing an average temperature so far of 13.7 deg C, which is 1.1 deg C below the monthly average.

With figures only going up to the 15th of the month, it is of course impossible to say how the month could finish overall. It's certainly too early to say whether this month will be a record-breaker, as that will depend on how the second half of the month plays out.

While more rain is expected in parts of the UK today there will also be some dry and sunny weather too. The good news is that the weekend is set to bring drier and brighter weather to many parts of England and Wales – while the far north west of Scotland is likely to see some much-needed rain.

Date Created
July 2012

How is the weather affecting pollen?

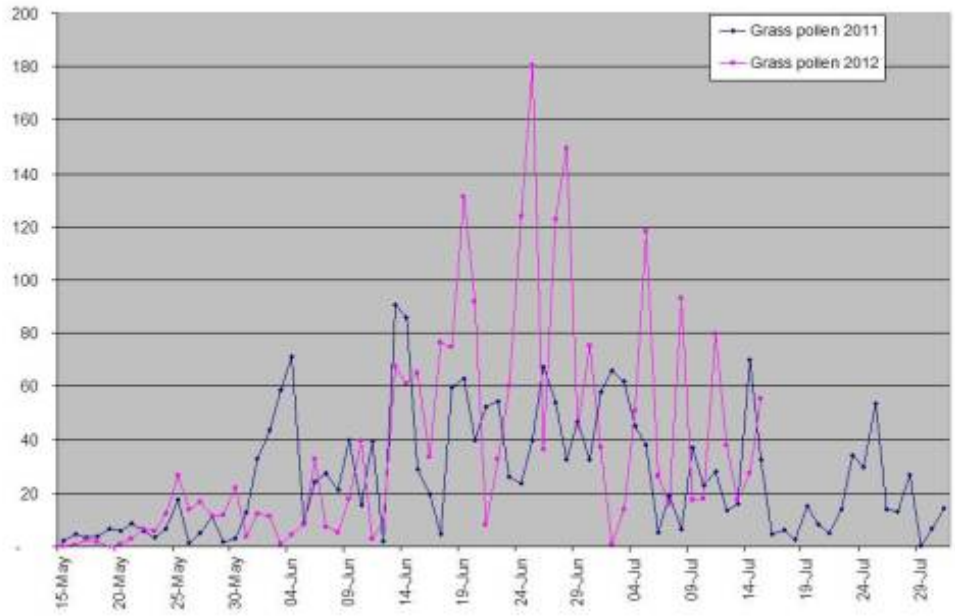
Description

The weather has been very unsettled during June and the start of July, and this has been reflected in the pollen counts. As we predicted back in May, there have been some very high counts, but there have also been some days when the pollen has been washed out by the heavy rain.

The heavy rain we have seen has maintained the strong growth of native plants that started with the very wet April. This means that there is an ample supply of pollen from grasses and weeds such as nettle. However, the unsettled weather has meant that pollen counts have fluctuated significantly from day to day and place to place.

Further high pollen counts are expected during any drier and sunnier interludes. This will increasingly come from weed pollens.

The graph below shows how the pollen count has changed significantly from day to day this summer, in response to the weather, and that on high days it has been much higher than last summer:



Pollen count has changed significantly from day to day this summer in response to the weather.

Patrick Sachon, Health Manager at the Met Office said: “The unsettled weather this summer has led to a fluctuating pollen count but as expected we have seen some very high levels when the weather has been good. Further high counts are expected during any settled, drier weather. We would therefore recommend that hay fever sufferers check the pollen forecast sponsored by Benadryl, every day and

do all that they can to manage their symptoms.”

Date Created
July 2012

Improving picture as many start school holidays

Description

After weeks of heavy rain across parts of the UK, conditions are set to improve for many areas this weekend.

More heavy showers will affect some parts during the rest of the week, but by Saturday most areas will see drier weather with any showers few and far between. Temperatures will reach the low 20s Celsius.

Sunday will see the improved weather continue for a large part of England and Wales, with mostly dry weather and bright or sunny spells expected. However, the north and west of the UK, can expect some rain – which will be heavy in places – with strong winds.

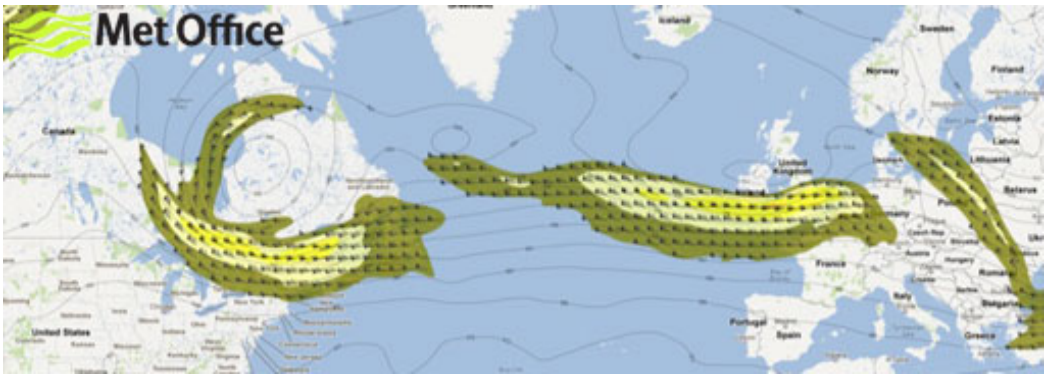
Drier weather for many, with rain where it's needed

Martin Young, Chief Forecaster at the Met Office, said: "As we move towards the weekend we will see a return to a more normal summer weather pattern for the UK. This will bring dry and bright conditions to southern parts over the weekend, and some much needed rainfall to the far north west of Scotland – where it has been exceptionally dry."

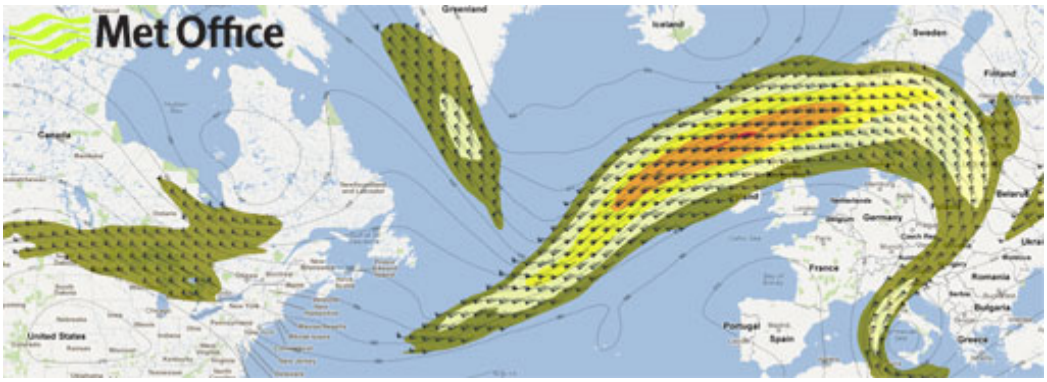
Jet stream returning to 'normal' position

There has been a lot of talk about the position of the jet stream in relation to the recent wet weather, with this narrow band of fast flowing winds having been much further south than we would expect at this time of year.

Over the next few days, the jet stream is expected to move to its more usual position to the north of the UK, guiding rain-bearing low pressure systems from the Atlantic away from the country. This is why we expect to see a move to more normal summer conditions, with the south and east seeing the best of any drier and brighter conditions.



The above picture shows the position of the jet stream on 18 July 2012.



The forecast for 23 July 2012 shows the jet stream much further to the north.

Looking to the Olympics

There is understandably a huge amount of interest in what the weather will be doing at the end of next week in time for the Opening Ceremony of the Olympic Games. However, it's still a little early to give a detailed forecast for the Olympic Stadium for the big opening event.

Sandie Dawe, Chief Executive at VisitBritain said: "The weather is a peculiarly British obsession, our international visitors come all year round for our temperate climate and enjoy a dash of unpredictability. Sunshine will help to get us all in the party mood, as we show the warmth of our welcome and the British know how to host not just a great Games but a great party too. Come rain or shine – Britain is the place to be in 2012."

As ever, we'll be working round the clock to make sure everyone – from the UK public, to athletes, coaches, and the organisers of the Games – has the very latest picture of what the weather has in store. For the latest information, keep up to date with our online forecasts and warnings.

Date Created
July 2012

Weather forecasts for the Olympic Games

Description

The Met Office is providing weather forecasts for all Olympic venues during the Games and beyond. As part of the services provided for London 2012, we have installed additional weather observation

During

the Olympic and Paralympic games the Met Office will also be showcasing some cutting-edge weather techniques and technology in its forecasting, as well as providing additional services for the public. To add specialist knowledge and expertise, the Met Office will have 12 forecasters on site across the Olympic venues throughout the games.

For easy access to the latest forecast for each sport and Olympic venue, all the links you need are below.

Sports		
Archery	Cycling – Mountain bike	Marathon swimming
Athletics	Cycling – Road	Rowing
Beach Volleyball	Equestrian	Sailing
Canoe Slalom	Football	Shooting
Canoe Sprint	Hockey	Tennis
Cycling – BMX	Modern Pentathlon	Triathlon
Locations		
Olympic Park	North Greenwich Arena	Horse Guards Parade
Lords Cricket Ground	ExCel centre	Lee Valley White Water Cer
Wembley Arena	Eton Dorney	Hadleigh Farm, Essex
The Mall	Box Hill	Hampton Court Palace
City of Coventry Stadium	Hampden Park, Glasgow	Millennium Stadium
Old Trafford	St James' Park, Newcastle	Hyde Park
Weymouth & Portland	Royal Artillery Barracks	Wimbledon

If you're lucky enough to be attending an Olympic or Paralympic event, you can keep up to date with the local forecast while you're there on our mobile applications for iPhone and Android, or on our mobile website.

Date Created

July 2012

Weather and sports

Description

With just days to go until the opening ceremony of the London 2012 Olympic Games, we look at the affect of the weather on four Olympic sports – archery, hockey, windsurfing and triathlon .

Many sports are affected by the weather in some way and conditions are important to athletes and spectators alike. It can help or hinder – headwinds make running and cycling harder, while tailwinds help push us forward, certain conditions can even make world records invalid. For sports like windsurfing, the weather is central to the entire event – without wind, the event cannot take place.

On the whole, dry and settled conditions are favoured by competitors in most sports. However, high temperatures can be challenging, significantly affecting the performance of athletes and, in extreme cases, can cause heat illnesses such as heat cramps and heat stroke.

The Met Office is working closely with LOCOG to provide weather forecasts and information to teams and their trainers throughout the Olympic and Paralympic games. In the build up to the Olympics we've also been looking in more detail at how Olympic athletes and professional sportsmen and women look to the weather forecast to train and plan strategy and tactics.

"The weather, and especially the wind, has a fundamental impact on the score. I need to know how to prepare", says Team GB archer Michael Pearte.

Read Michael's full interview.

Great Britain Hockey player Maddie Hinch says that actually rain can be a welcome part of the forecast – as long as it's not too cold.

Read Maddie's full interview.

Triathlete Todd Leckie told us his ideal conditions would be cool temperatures, no rain and a favourable tail wind. In Britain, though, he admits this is often not the case.

Read Todd's full interview.

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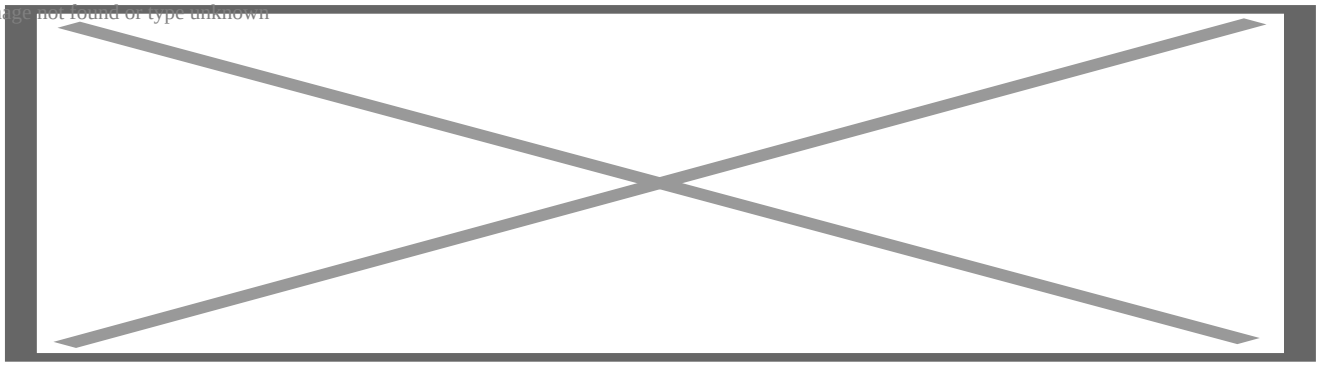


Windsurfing and the weather are intrinsically linked – the wind has an impact on every single session, affecting those just starting out and experienced professionals.

Amy Carter, Editor of Boards Magazine, explains the conditions that windsurfers look out for.

For weather forecasts for all Olympic venues see our events forecast page.

Date Created
July 2012

Science and technology developments for Olympic and Paralympic weather forecasts

Description

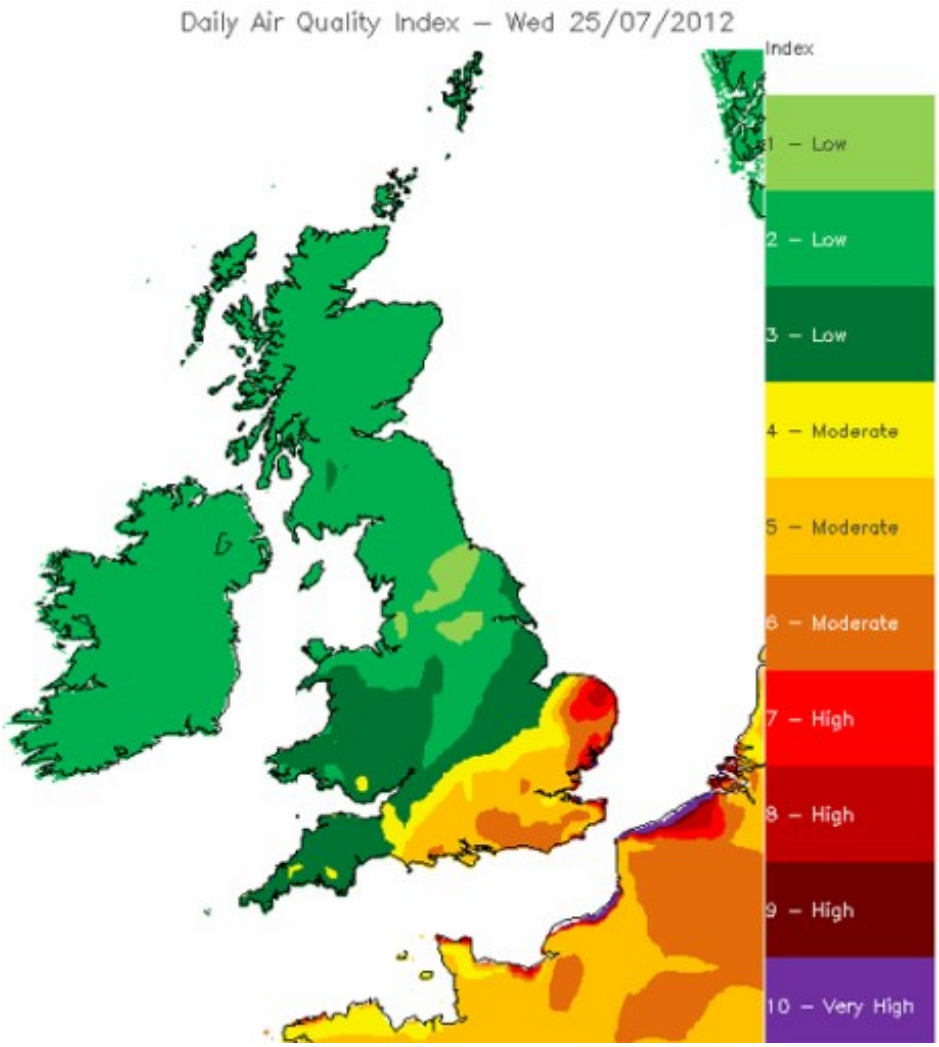
Our science and technology developments for the Olympic and Paralympic Games will help to deliver increasing accuracy and detail in our weather forecasts during the Games and well into the future.

As part of the services provided for London 2012, we have installed additional weather observation equipment and developed enhanced forecasting capability to support our staff.

The developments include daily air quality forecasts, high resolution wind and wave modelling for Weymouth and Portland, high resolution ensemble forecasting at 2 km for the whole of the UK and additional weather observing technology at Olympic sites.

Daily air quality forecasts

Weather plays a big part in determining air quality and air quality forecasts are now available for all 5000 forecast locations on our website. During the Olympics, air quality forecasts will also be available in map format. We've also produced a guide to how the air quality index affects health.

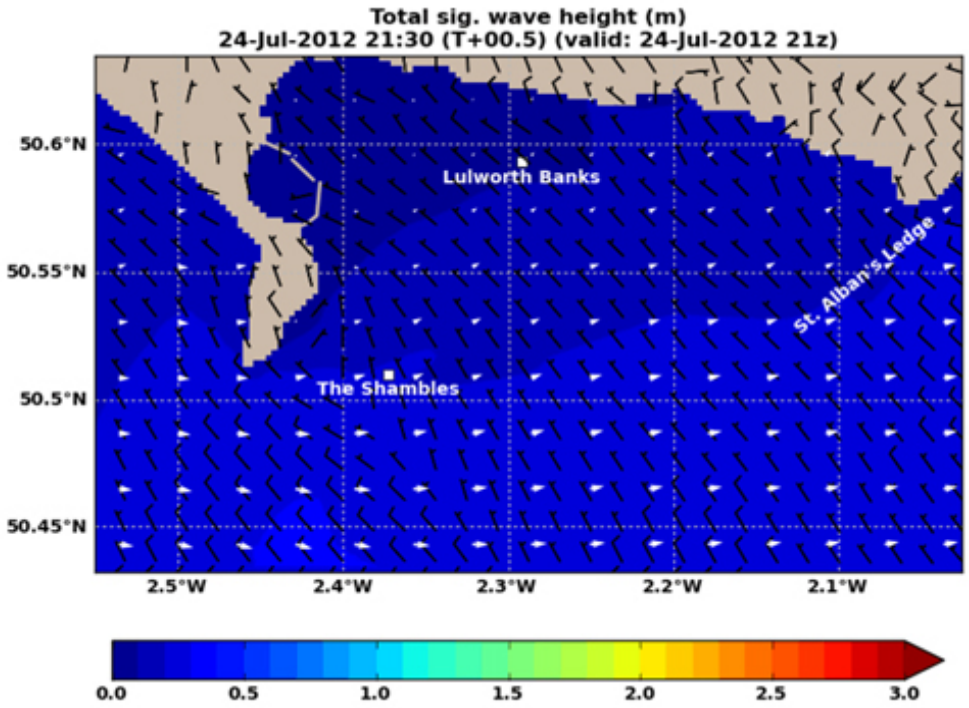


Sample daily air quality index map

Wind and wave modelling for Weymouth and Portland

Currently, our models can generate atmospheric weather data for every 1.5 km over the whole of the UK. However, due to the complexity of the winds around Weymouth and Portland a model will be used which gives nearly 20 times more detail than is usually available.

This ensures the highest detail possible for forecasts for wind and waves in the area during the London 2012 competition. While the output from these specially run models is primarily intended to help Met Office forecasters at the Weymouth and Portland events, it will also be available for the public to see for the duration of the Olympics in the showcase of the high resolution wave model.

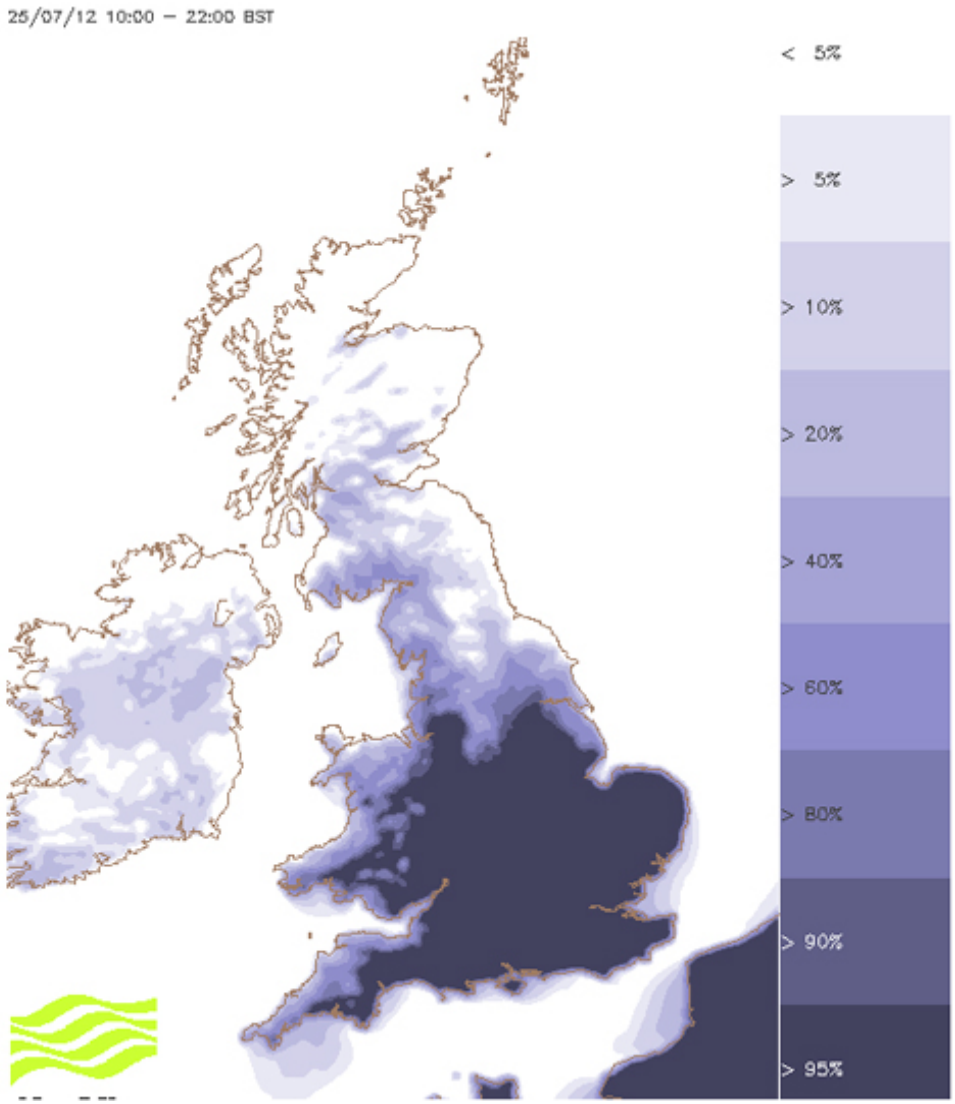


Example total significant wave height forecast for Weymouth and Portland

High resolution ensemble forecasts

Recently the Met Office introduced cutting edge technology into its operational forecasting to help improve the accuracy of forecasting for ‘small-scale’ weather features like thundery showers. For the Olympics, the Met Office is set to take high-resolution forecasting a step further by running multiple forecasts at the same time, a technique called ensemble forecasting.

The high-resolution ensembles will be tested throughout the Olympics before being subject to further research with a view that the facility could be introduced operationally in the future, potentially leaving a legacy that will benefit the UK well after the Olympic and Paralympic Games are over.



Example high resolution ensemble forecast showing chance that temperature will reach 20 C

Related articles

- Weather forecasts for the Olympic Games (metofficenews.wordpress.com)
- Weather and sports (metofficenews.wordpress.com)

Date Created
July 2012

Ground-breaking forecasting keeps Olympic rowing on course

Description

Ground-breaking high resolution weather forecasting lies at the heart of the Met Office's services to the Olympic Games, providing the best advice available to both the organisers and competitors at venues in London and across the UK.

The London 2012 Olympic Games got underway in spectacular style on Friday night. As forecast, the Olympic Park saw a brief shower in the run up to the opening ceremony but the main event stayed dry.

The Met Office has been working with LOCOG, providing both longer term planning information and up to the minute details on the likely weather conditions as the focus now moves to the sporting events.

With the rowing events set to get underway on Saturday, accurate forecasts of wind conditions will be crucial to success. Predicting the subtle shifts in wind direction and speed over a small area like the Eton Dorney rowing lake is becoming possible thanks to the introduction of some new advances.

The Met Office weather forecasting model typically forecasts the weather using grid boxes of 4 x 4 km. But the new UKV model uses a much finer scale at 1.5 x 1.5 km over the whole of the country.

Just as increasing the number of pixels on a digital camera improves the picture, reducing the size of these grid boxes can add much more detail and clarity to the forecast.

For the Olympics, the Met Office is set to take high-resolution forecasting a step further by running multiple forecasts at the same time, a technique called ensemble forecasting.

Brian Golding, Deputy Director of Weather Science at the Met Office, explained: "By running multiple forecasts with slightly different starting conditions we can get a handle on how likely a forecast is. This means we can assess the chances of weather impacts in a certain area at a certain time, so we can give much more useful guidance."

Using this system, detailed probability forecasts of head, tail and crosswinds will be used by the rowing teams at Eton Dorney as they look for that decisive edge that may bring that prized Olympic medal.

The high-resolution ensembles will be used throughout the Olympics. They will then be subject to further research, with a view that the facility could be introduced operationally in the future. This will potentially leave a legacy that will benefit the UK well after the Olympic and Paralympic Games are over.

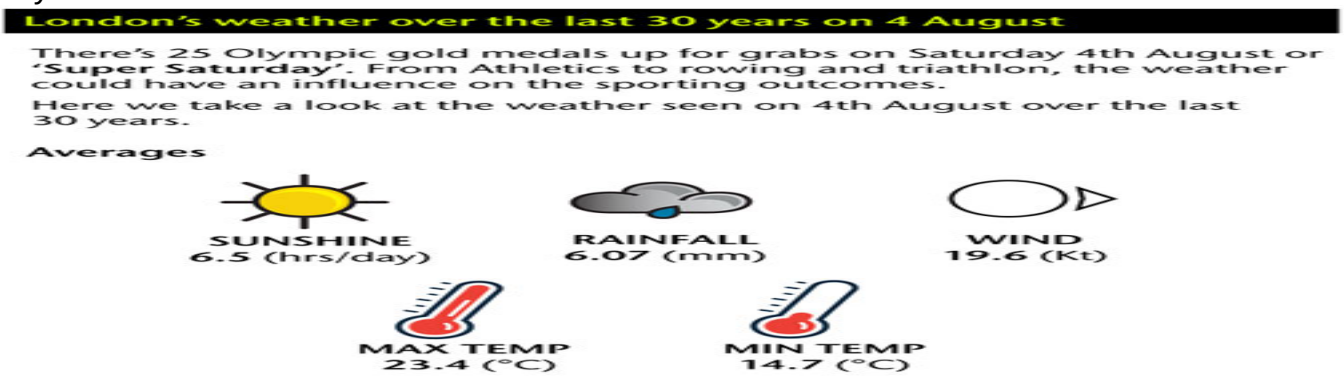
You can keep up to date with our weather forecasts on our website or with our specific London 2012 Olympic Games forecasts.

Date Created
July 2012

What does the weather have in store for ‘Super Saturday’?

Description

With 25 gold medals up for grabs this Saturday we look back at the weather on this day over the last 30 years.


London’s weather over the last 30 years on 4 August
There’s 25 Olympic gold medals up for grabs on Saturday 4th August or ‘Super Saturday’. From Athletics to rowing and triathlon, the weather could have an influence on the sporting outcomes.
Here we take a look at the weather seen on 4th August over the last 30 years.
Averages
SUNSHINE
6.5 (hrs/day)
RAINFALL
6.07 (mm)
WIND
19.6 (Kt)
MAX TEMP
23.4 (°C)
MIN TEMP
14.7 (°C)
Maximum and minimum
Highest recorded maximum temperature 34.0 °C in 1990
Lowest recorded minimum temperature 11.2 °C in 1988
Most recorded sunshine hours 14.3 in 1998

Date	(hrs/day)	(mm)	Wind	Max (°C)	Min (°C)
4/8/70	4.4	0	-	27.2	17.2
4/8/71	3	52.4	-	19.4	15.3
4/8/72	2.5	1.7	-	19.0	12.0
4/8/73	4.4	3	21	20.8	15.0
4/8/74	0	5.8	28	16.0	13.8
4/8/75	12	0.1	22	31.2	18.0
4/8/76	12.6	0	17	23.2	13.0
4/8/77	11.1	0	20	24.9	14.5
4/8/78	3.8	4	20	20.6	12.9
4/8/79	7.2	0	11	21.6	14.7
4/8/80	0.5	0	26	21.1	17.1
4/8/81	7.5	0	10	27.2	15.4
4/8/82	1.9	7.1	14	25.8	18.0
4/8/83	2.4	0	15	23.7	11.6
4/8/84	2.9	31.5	18	20.6	15.0
4/8/85	0	18.1	27	17.2	11.7
4/8/86	3.5	0	16	19.4	11.5
4/8/87	9.4	1.8	17	18.1	11.5
4/8/88	4.2	0	20	21.7	11.2
4/8/89	13.5	0	13	25.3	13.0
4/8/90	13.2	0	21	34.0	19.7
4/8/91	10.1	0.3	13	24.8	16.7
4/8/92	11.9	0	22	23.4	13.3
4/8/93	2.1	1	23	20.3	13.8
4/8/94	0.4	1.2	18	26.1	20.6
4/8/95	11.9	0	20	27.4	16.3
4/8/96	13.6	0	22	25.0	13.1
4/8/97	2.5	1	26	22.3	16.3
4/8/98	14.3	0	20	23.2	14.5
4/8/99	6	17.8	17	27.6	14.9
4/8/00	8	0	15	23.0	14.9
4/8/01	7.3	12.8	27	22.8	12.1
4/8/02	4.9	12.6	19	20.6	13.5
4/8/03	12	0	19	30.5	16.9
4/8/04	13	0	13	28.7	16.6
4/8/05	9.4	3	22	22.8	13.2
4/8/06	2.9	0	18	22.4	13.9
4/8/07	13.9	0	24	26.3	15.1
4/8/08	5.2	0.8	24	21.7	12.5
4/8/09	0	0.6	20	23.9	16.9
4/8/10	1.5	3.4	22	20.8	15.2
4/8/11	1	8.2	23	21.1	16.7

Get the forecast for every Olympic event this Saturday on our Olympic weather pages.

Date Created
July 2012